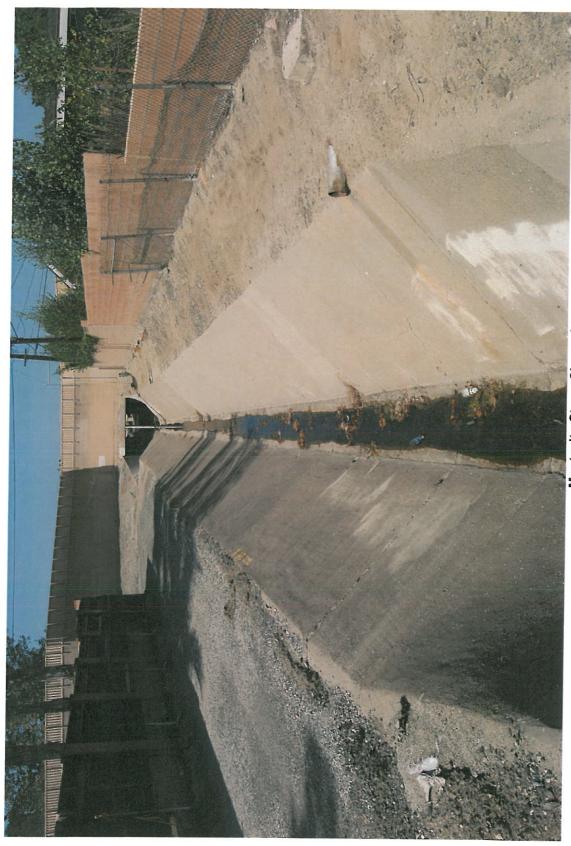
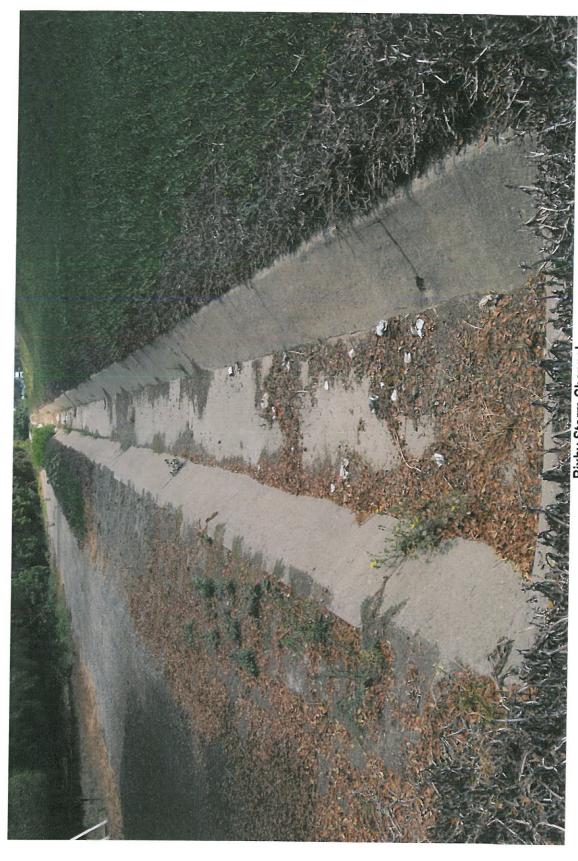
APPENDIX B PHOTOS



Montecito Storm Channel

Photo Date: July 23, 2009

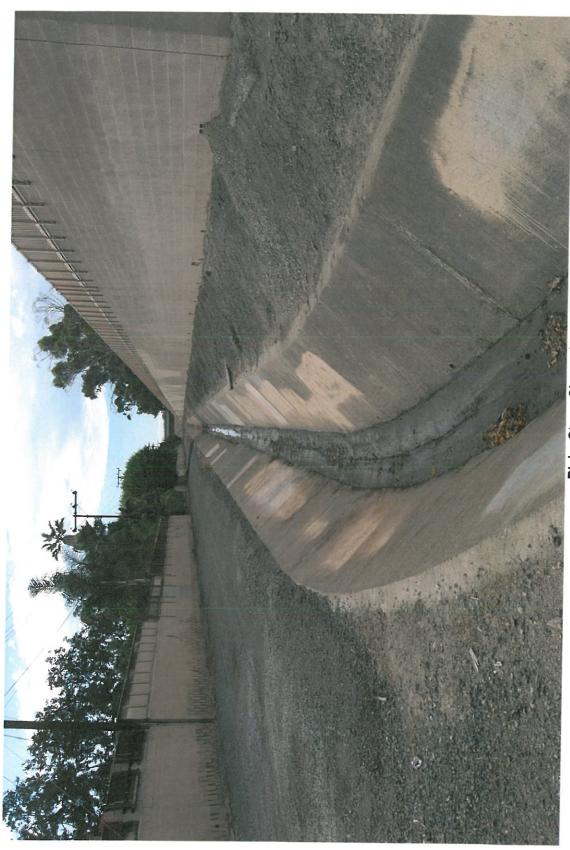
Direction: Picture taken facing southwest, from east of I-405.



Bixby Storm Channel

Photo Date: July 29, 2009 Direction:

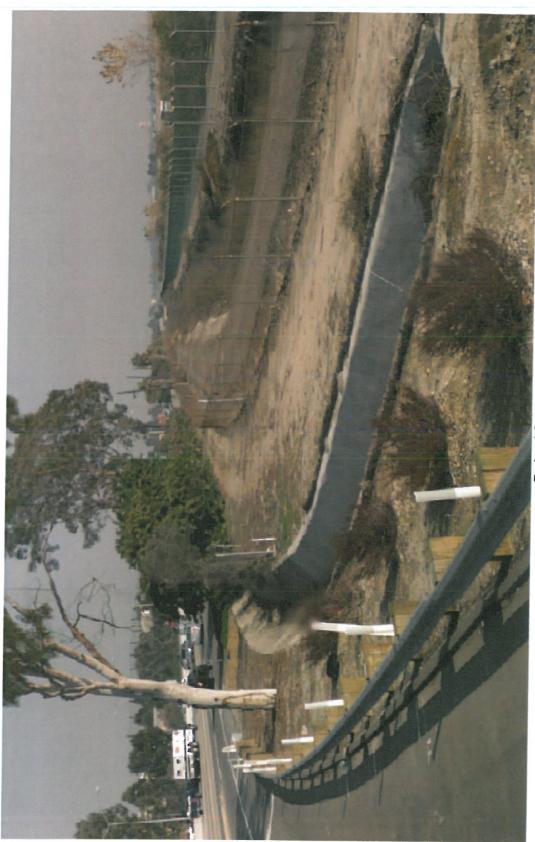
Picture taken facing south and east of I-405



Bixby Storm Channel

Photo Date: August 4, 2009

Direction: Picture taken facing west and north of I-405.



Federal Storm Channel

Photo Date: Google 2009

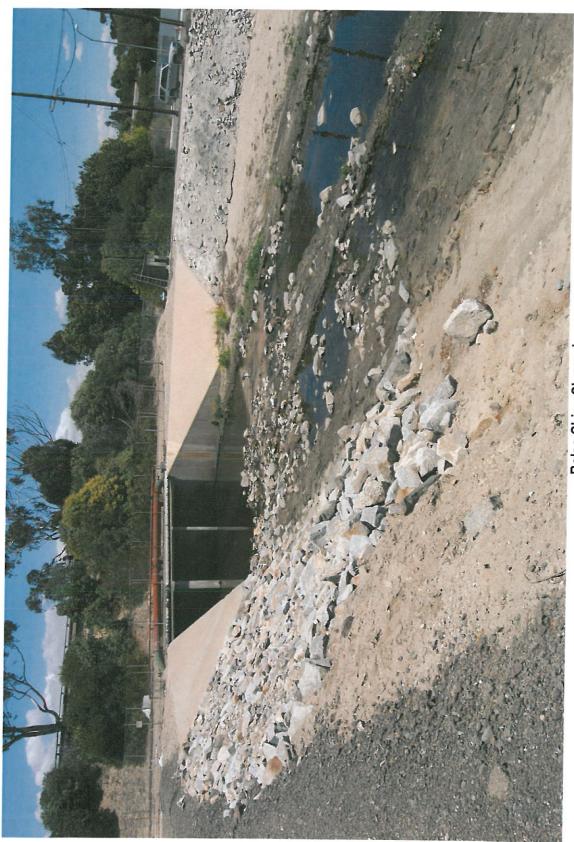
Direction: Picture taken facing northeast from south of I-405.



Federal Storm Channel

Photo Date: July 23, 2009

Direction: Picture taken facing east from south of I-405.



Bolsa Chica Channel

Photo Date: April 28, 2010

Direction: Picture taken facing North, from south of I-405.



Milan Storm Drain

Photo Date: April 28, 2010

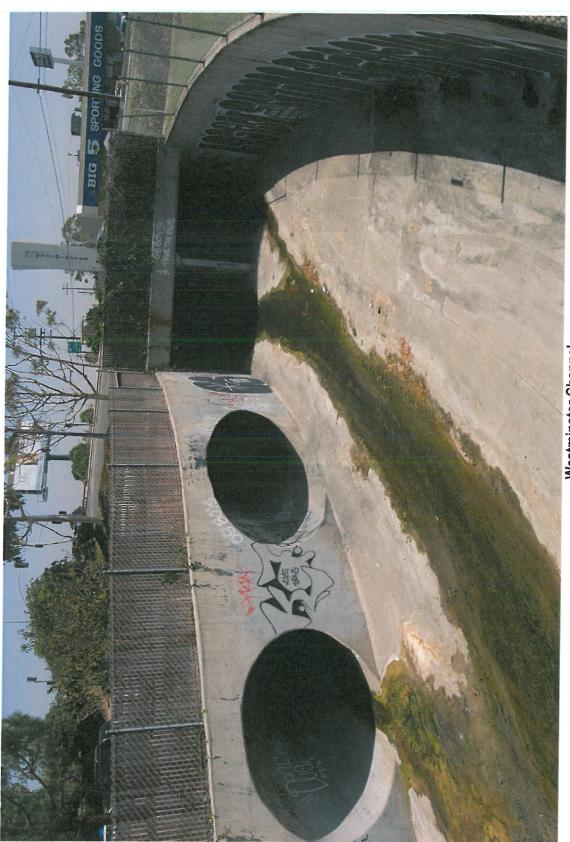
Direction: Picture taken facing north, from south of I-405.



Anaheim Barber Channel

Photo Date: July 23, 2009

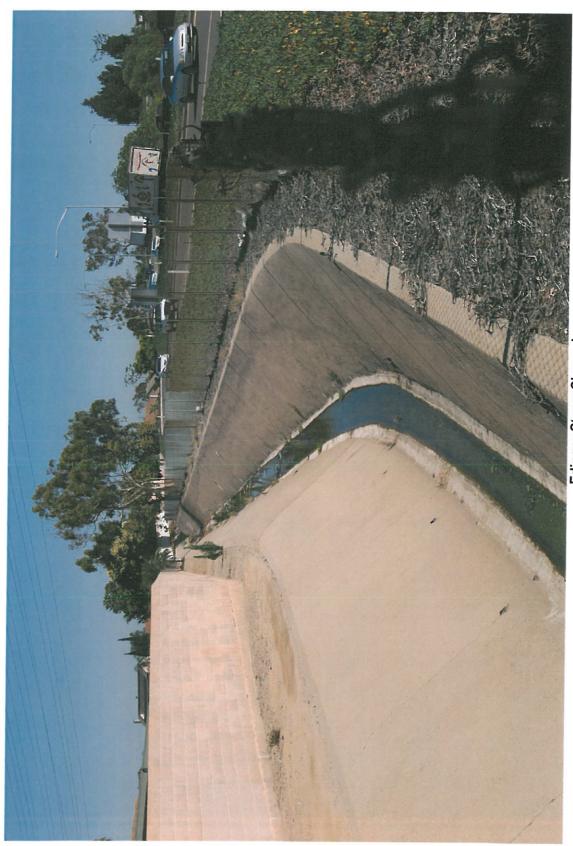
Direction: Picture taken facing southwest, from north of I-405.



Westminster Channel

Photo Date: July 27, 2009

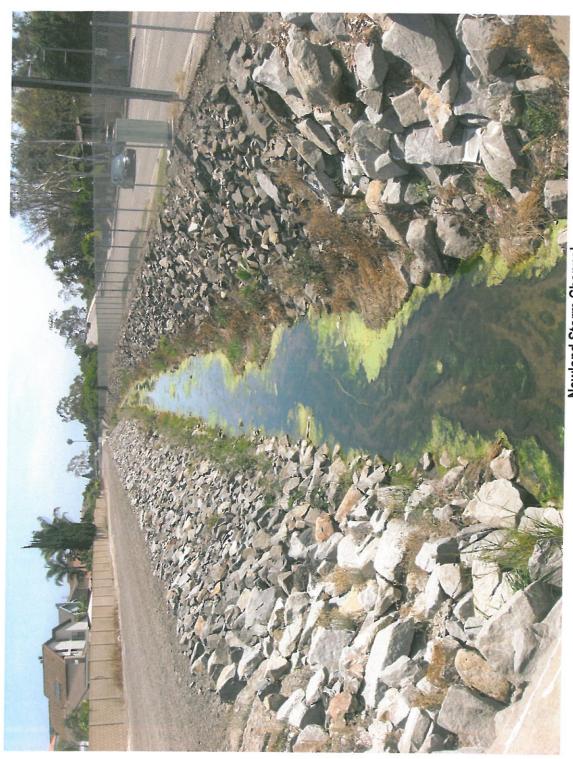
Picture taken facing Northeast (Northwest of the intersection Bolsa Ave/Goldenwest St.) Direction:



Edinger Storm Channel

Photo Date: August 4, 2009

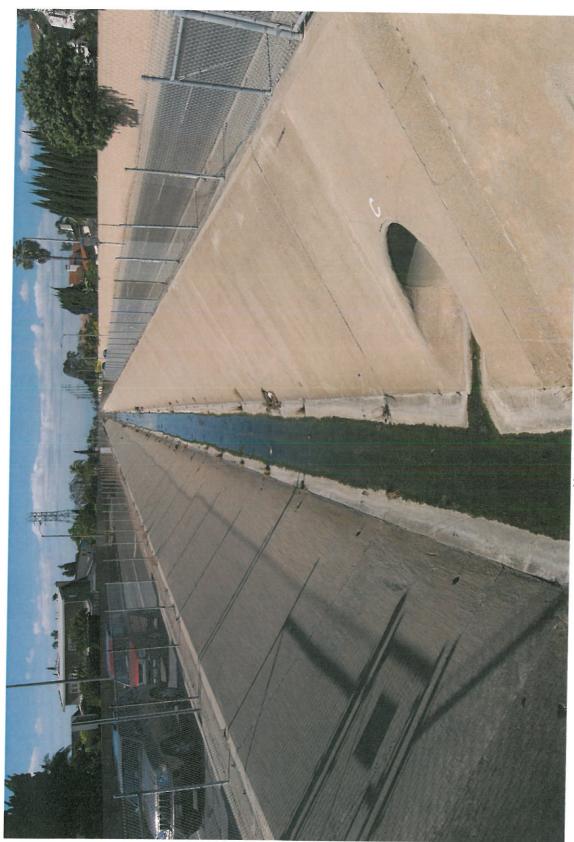
Direction: Picture taken facing southeast, from north of I-405.



Newland Storm Channel

Photo Date: August 4, 2009

Direction: Picture taken facing south, from north of I-405.



Newland Storm Channel

Photo Date: April 28, 2010

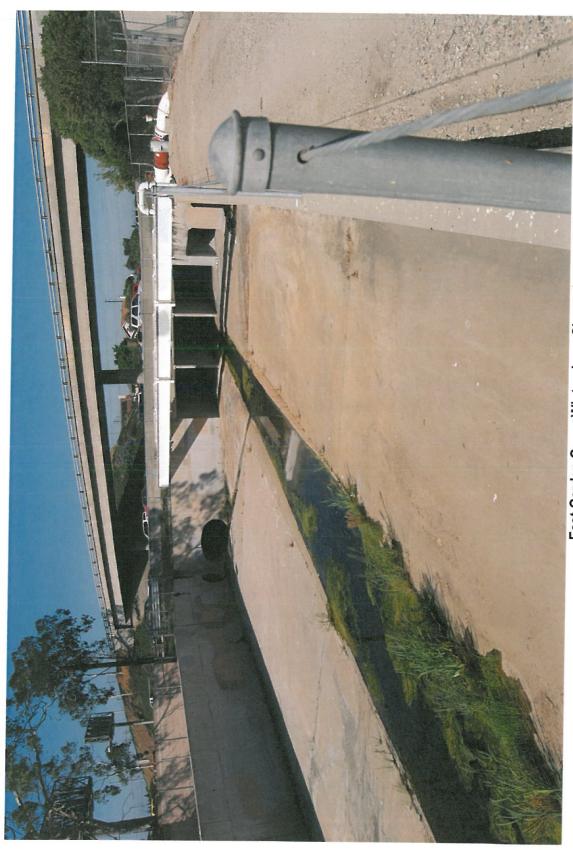
Direction: Picture taken facing north, from north of I-405.



East Garden Grove Wintersburg Channel

Photo Date: August 4, 2009

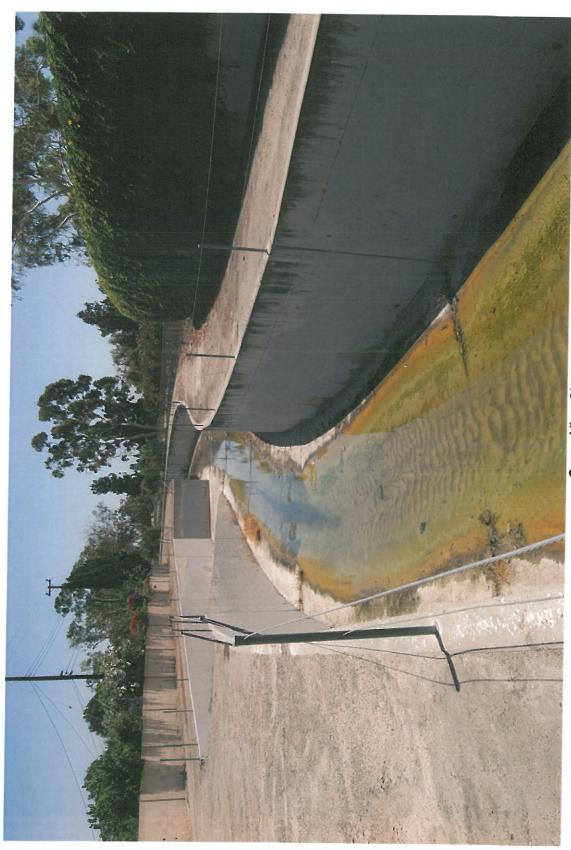
Direction: Picture taken facing southeast, north of I-405.



East Garden Grove Wintersburg Channel

Photo Date: August 4, 2009

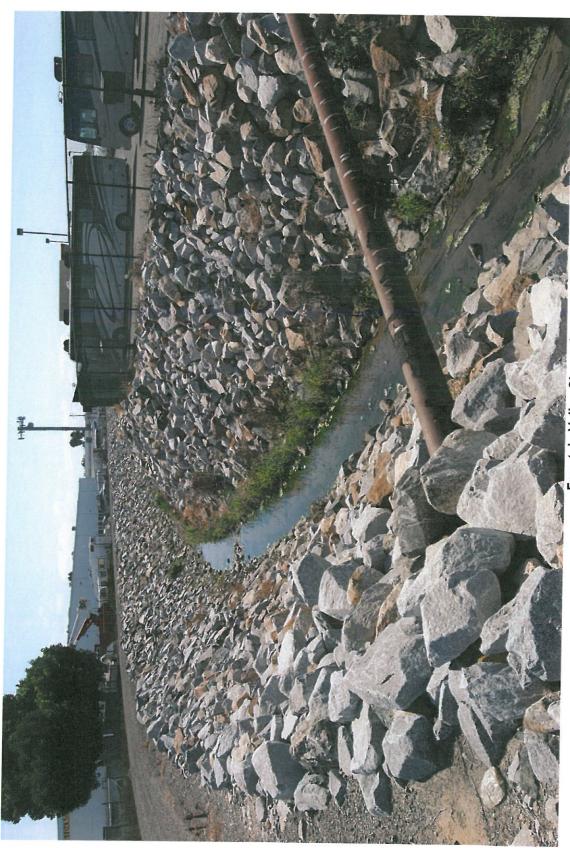
Direction: Picture taken facing northeast, south of I-405.



Ocean View Channel

Photo Date: July 28, 2009

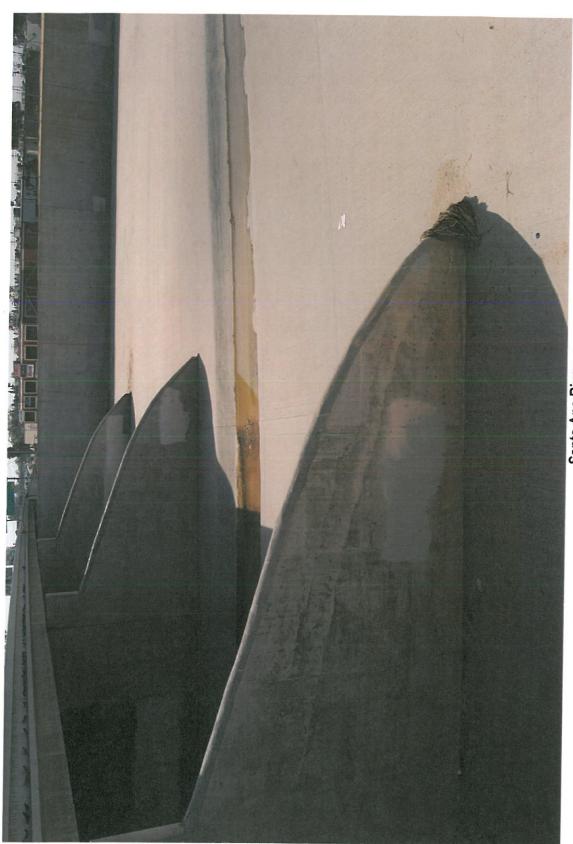
Direction: Picture taken facing southeast, from north of I-405.



Fountain Valley Channel

Photo Date: July 28, 2009

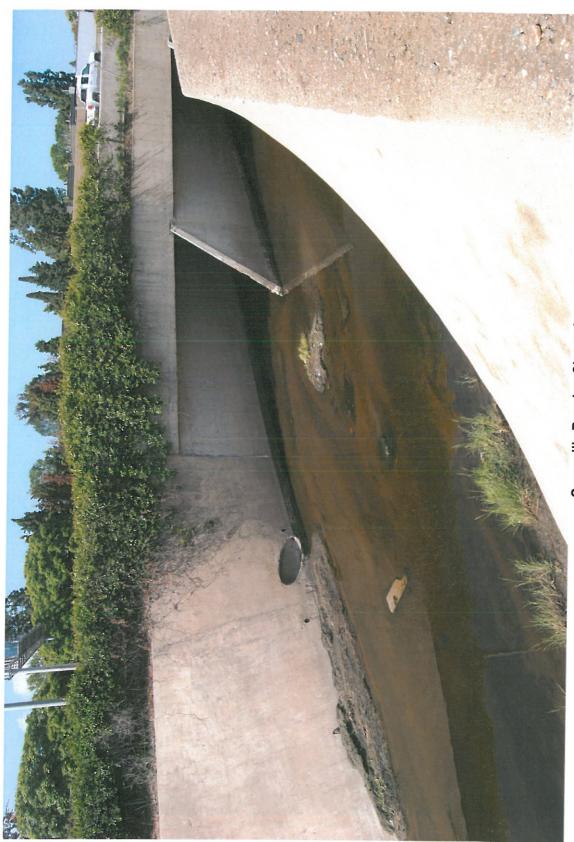
Direction: Picture taken facing southwest, from south of I-405.



Santa Ana River

Photo Date: July 29, 2009

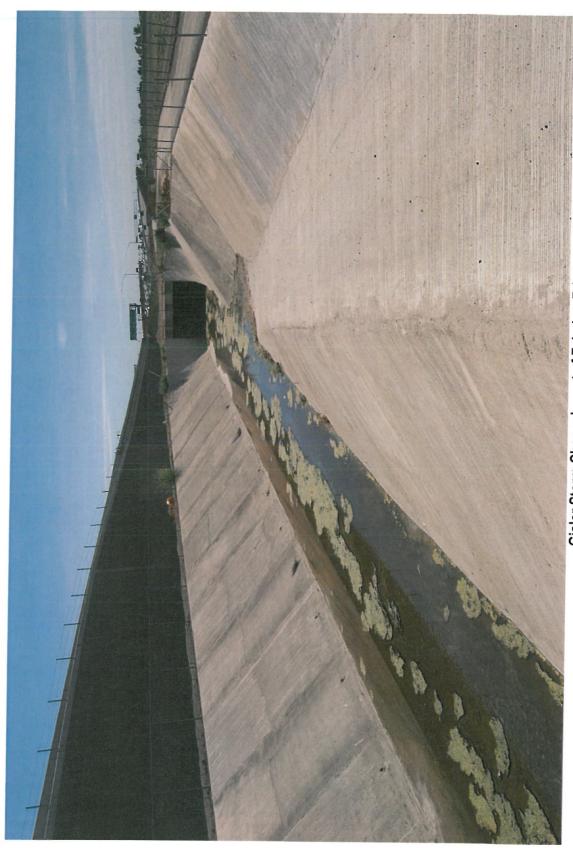
Picture taken facing northwest, from north of I-405. Drains from northeast to southwest and towards the Pacific Ocean. Direction:



Greenville Banning Channel

Photo Date: April 28, 2010

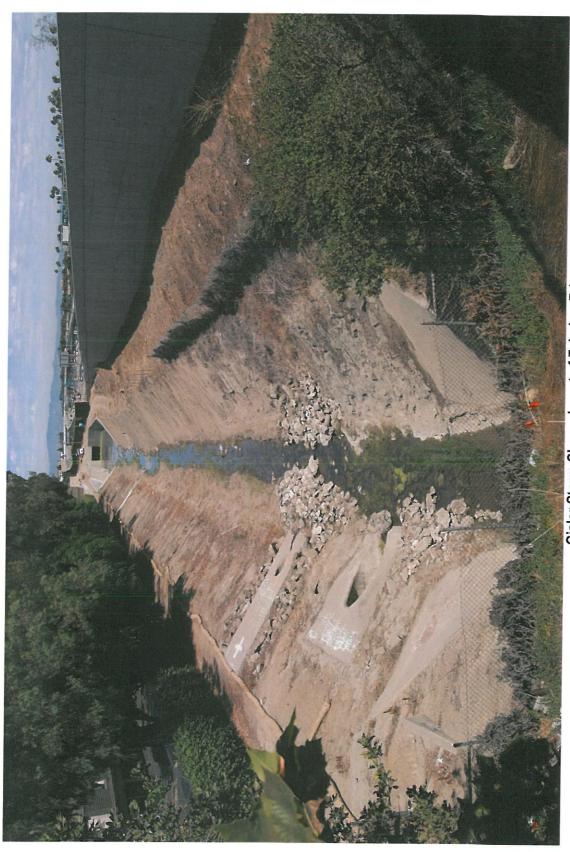
Direction: Picture taken facing southwest, from north of I-405.



Gisler Storm Channel, west of Fairview Rd.

Photo Date: April 4, 2009

Direction: Picture taken facing west, from north of I-405.



Gisler Storm Channel, east of Fairview Rd.

Photo Date: April 4, 2009

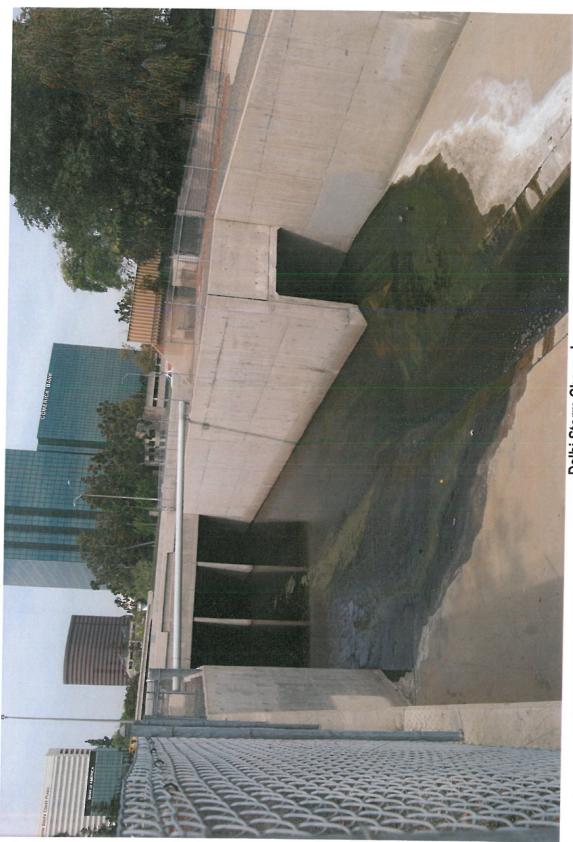
Direction: Picture taken facing east, from north of I-405.



Delhi Storm Channel

Photo Date: April 27, 2010

Direction: Picture taken facing South, from north of I-405.

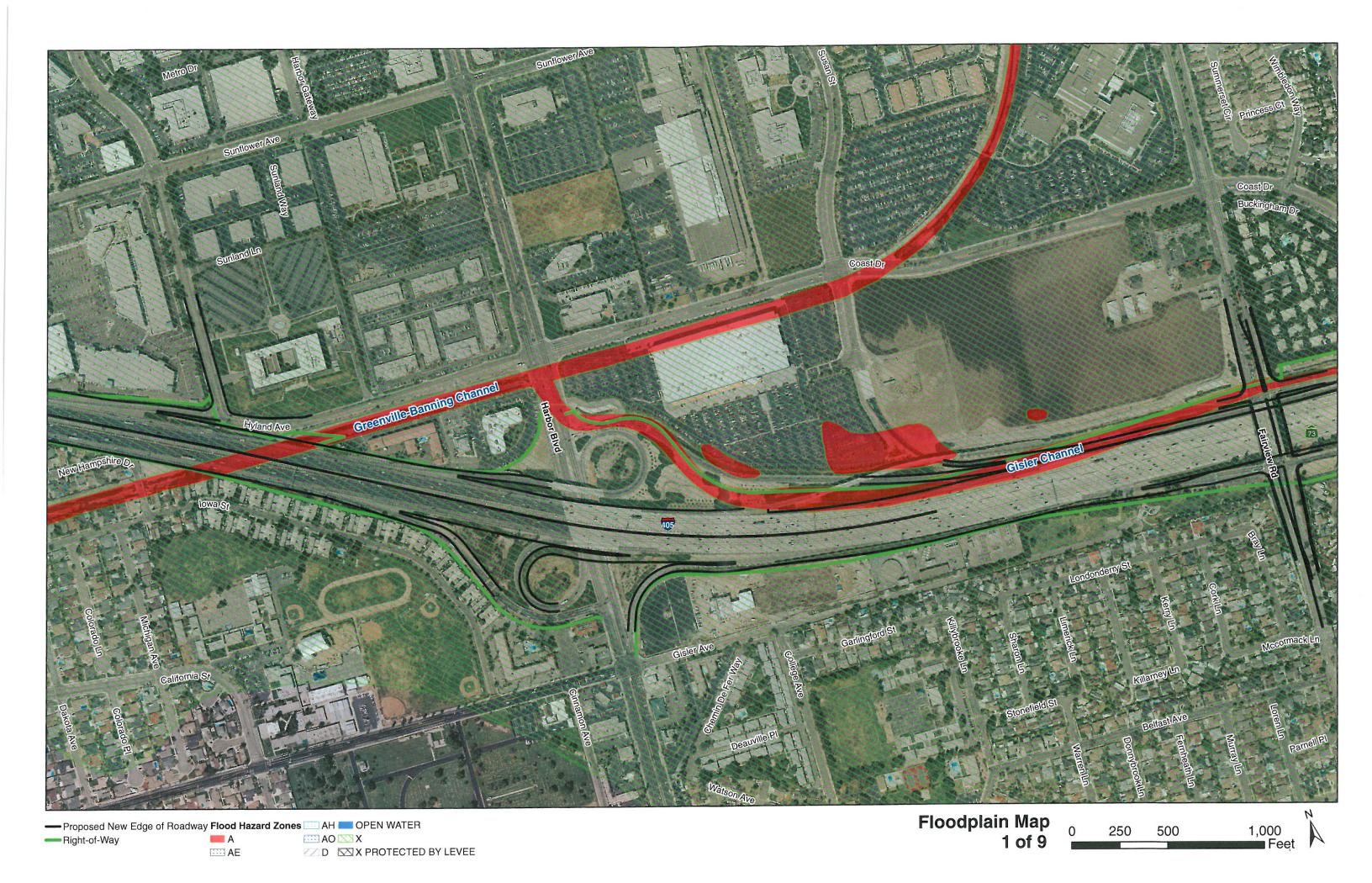


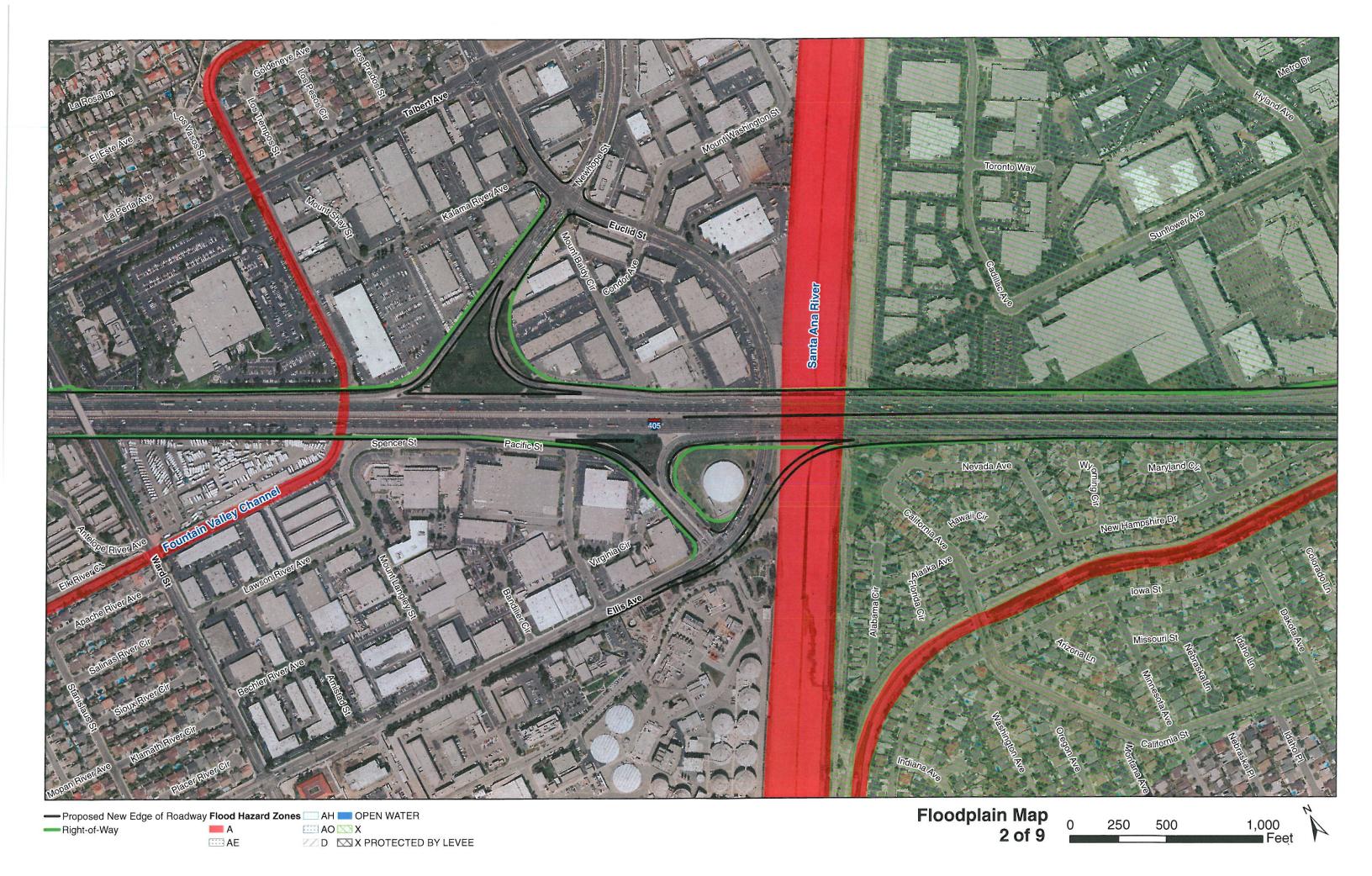
Delhi Storm Channel

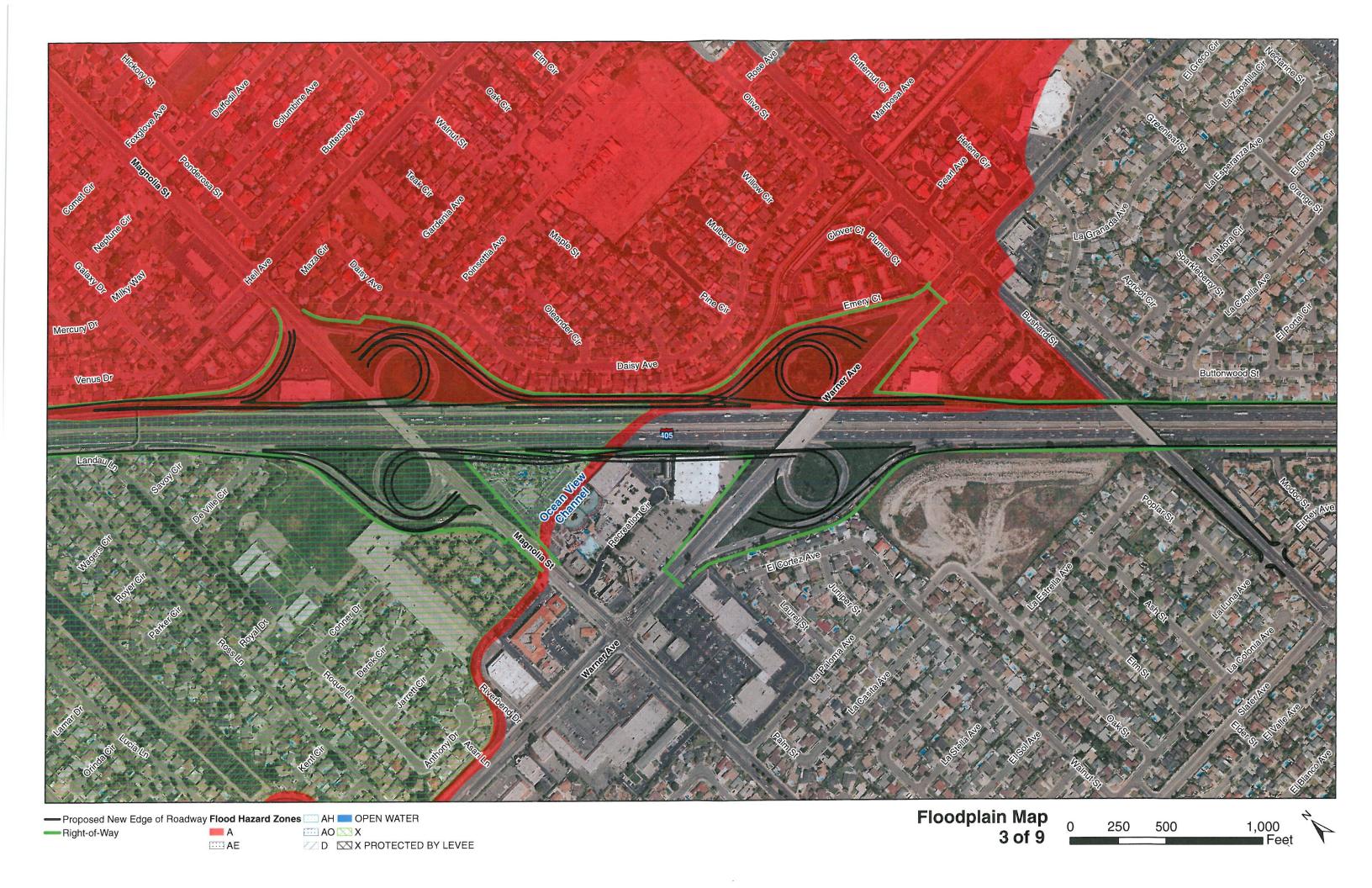
Photo Date: April 27, 2010

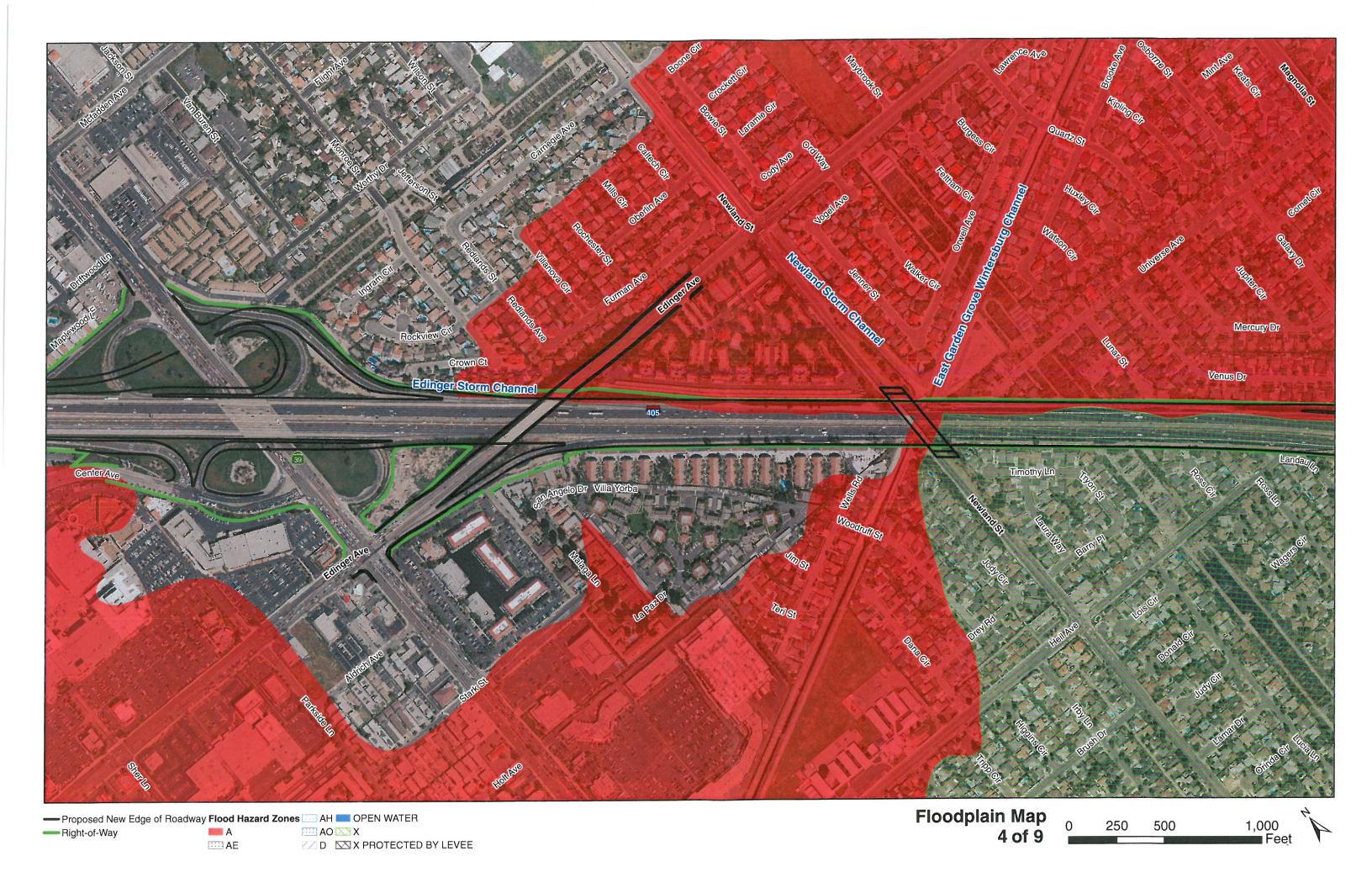
Description: Picture taken facing North, from south of I-405.

APPENDIX C PROPOSED ROADWAY IMPROVEMENTS ADJACENT TO FLOODPLAINS



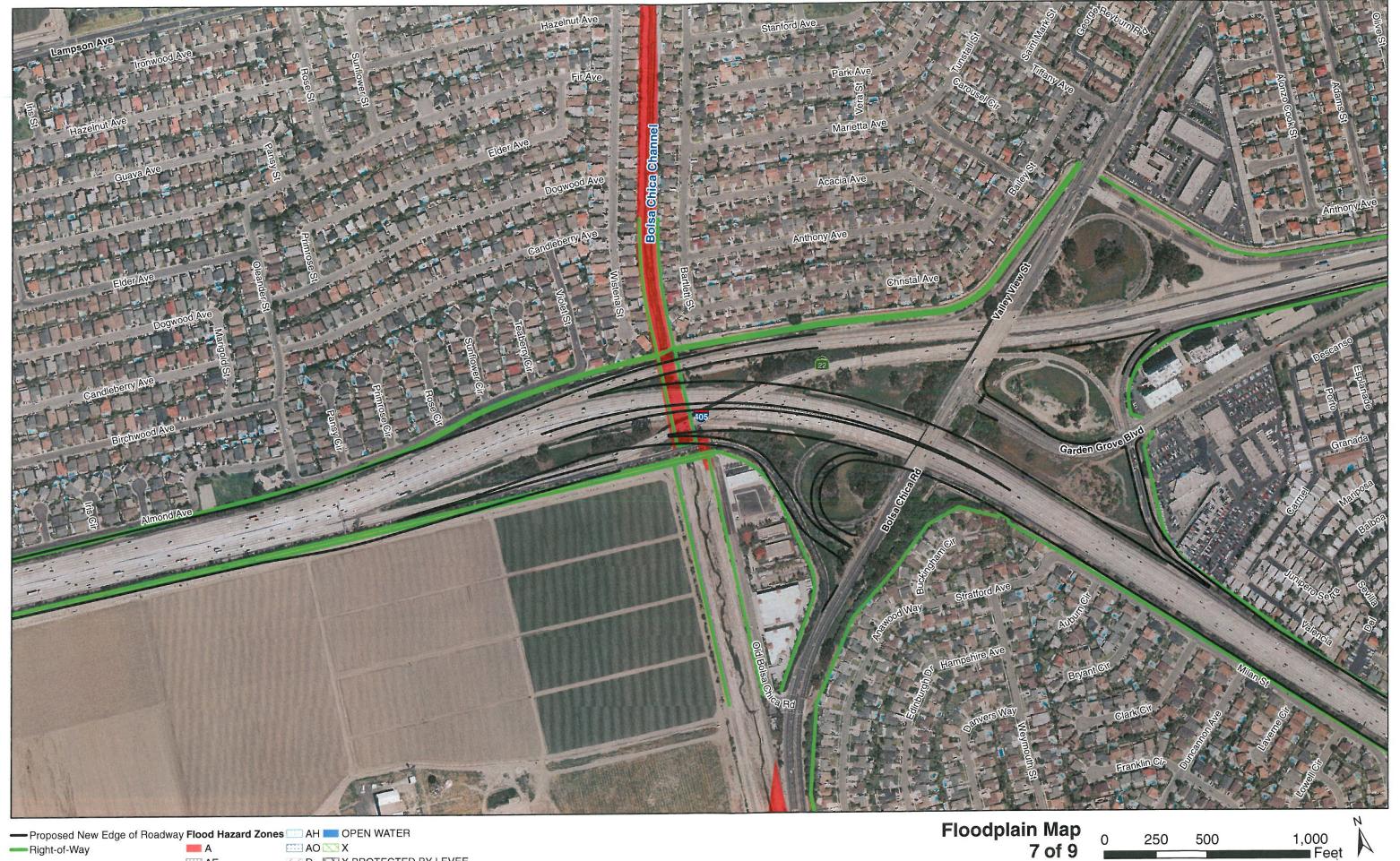












AO XX Right-of-Way ✓ D ☒ X PROTECTED BY LEVEE ⊞ AE

7 of 9

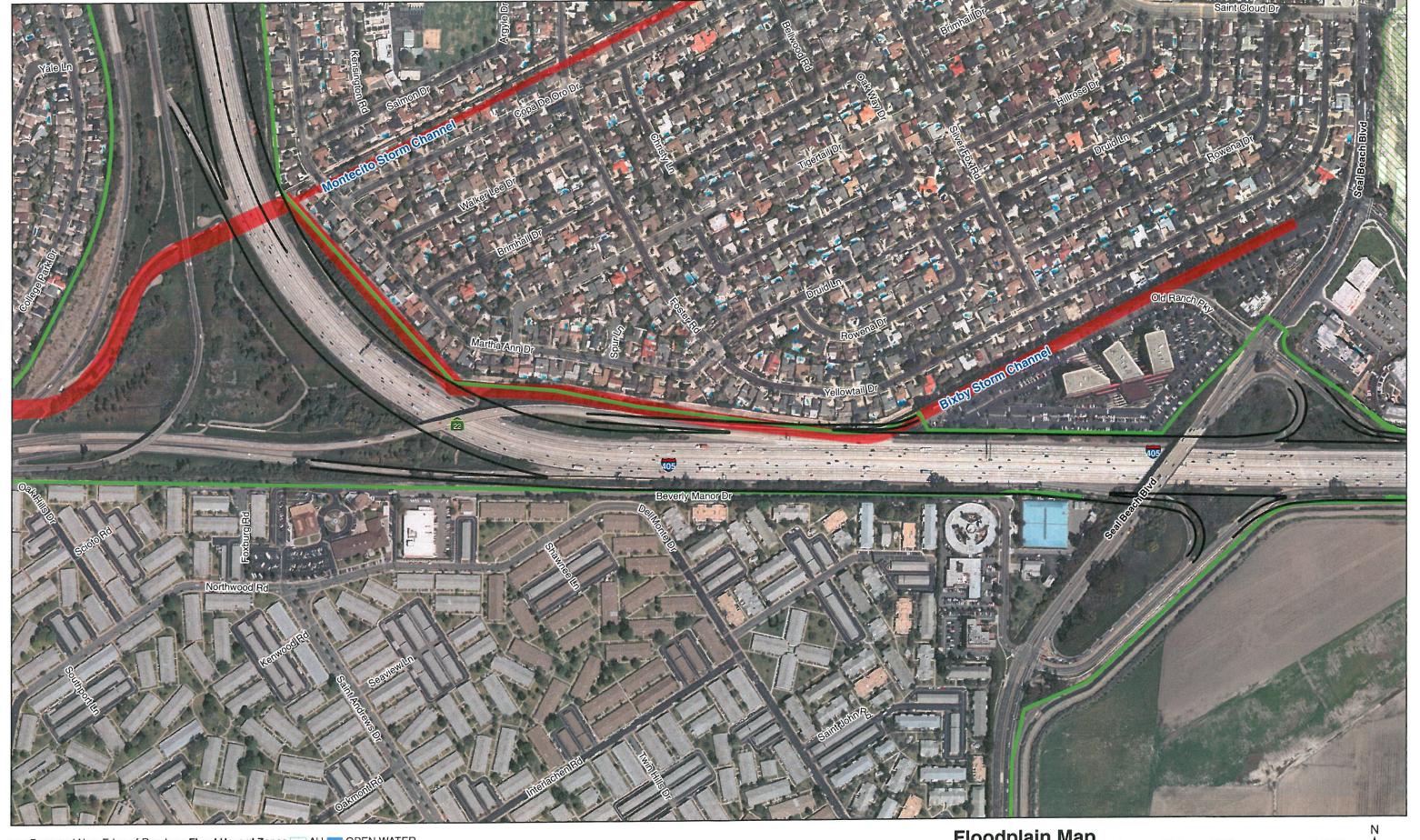


AO X ✓ D ☒X PROTECTED BY LEVEE

Right-of-Way

⊞ AE

Floodplain Map 8 of 9



── Proposed New Edge of Roadway Flood Hazard Zones
 ── Right-of-Way
 ── A
 ── A
 ○─ B
 ○─ B

Floodplain Map 9 of 9

250 500 1,000 Feet

APPENDIX D LOCATION HYDRAULIC STUDY FORMS

LOCATION HYDRAULIC STUDY FORM

	st.	12	Co.	OC	Rte.	405	P.M.	9.89/11.45				
\mathbf{E}^{p}		71621					Bridge No.	. N/A				
Flo	oodpl	ain Descri	ption:	Gisler S	Gisler Storm Channel							
1. Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls,												
etc. and design elements to minimize floodplain impacts)												
Roadway widening may impact flood structures during construction, but will be restored to original state.												
2 ADT												
L. 1	ADI.	• 1	Curren		07,000	_	Projected	435,000 (Alt. 3)			
3 1	Hydro	ulic Data:		Daga El	224 O	* * 1		23.4				
3. Hydraulic Data: Base Flood Q ₁₀₀ = Unknown ft ³ /s WSF ₁₀₀ = Unknown The flood of record if greater the Q												
WSE ₁₀₀₌ Unknown The flood of record, if greater than Q ₁₀₀ : Q= Unknown ft ³ / s WSE= Unknown												
						-	-					
					$\frac{\text{vn}}{2}$ m ³ /s		WSE=	Unknown				
Alt	2 141.1	r maps an	u studies	avallable	? YES	X	_ NO					
4. Is the highway location alternative within a regulatory floodway?												
	5 1110	YE		iternati v c		Zgulatory II						
				_	110		-					
5. A	Attach	n map with	flood lir	nits outli	ned showin	g all build	ings or othe	r improveme	ente			
with	hin th	e base flo	odplain.			0	ango or othe	i improveme	iits			
Pote	ential	Q100 back	water da	mages:								
	Б	• • • •										
A.		idences?				NO		YES_				
В. С.	Cro	er Bldgs?				NO		YES_	2000			
			C · 1	a		NO	X	YES_				
D.	man	ural and be	eneficial	lloodplan	n values?	NO	X	YES_				
6 T	vne o	of Traffic:										
0. 1	ype	i itallic.										
A. E	Emerg	gency supp	olv or eva	cuation r	oute?	NO		YES	v			
		gency vehi			NO		YES _	X X				
	177	cable deto			NO	X	YES —					
D. S	choo	l bus or m	ail route?)	NO	X	YES _					
7. Estimated duration of traffic interruption for 100-year event hours: 0												
	1311 4 17	22 0 4)	0.5	_ ====			-		-			
8. Es	stima	ted value	of Q100 fl	ood dama	iges (if any) – modera	te risk level	•				

A. B.	Roadway Property Total	\$ \$ \$	0 0 0								
9	Assessment of Le	evel of Risk	Low Moderate High	X							
For High Risk projects, during design phase, additional Design Study Risk Ar May be necessary to determine design alternative.											
	e – Dist. Hydraulic nbers 3,4,5,7,9)	Engineer		Date							
Is there any longitudinal encroachment, significant encroachment, or any support of incompatible Floodplain development?											
NO X YES If yes, provide evaluation and discussion of practicability of alternatives in accor 23 CFR 650.113											
Information developed to comply with the Federal requirement for the Location Hydraulic Study shall be retained in the project files.											
	– Dist. Project Er nbers 1,2,6,8)	ngineer		Date							

Di	st.	12	_Co.	OC	Rte.	405		P.M.	11.70	
EA	A	071621	_				3	Bridge No	. 55 0476	
Flo	oodpla	in Descrip	otion:	Greenvill	e Banning	Chanr				
1.	Descri	ption of P	roposal	(include ar	ny physica	al barr	iers i	.e. concrete	e barriers, sou	undwalls.
etc	c. and o	design eler	nents to	minimize :	floodplair	n impa	icts)		,	,
D.	1		2 1	12 12 D.C.			-			
Ko	aaway	widening	over 3-	2X12 RCI	3, extend	existii	ng RO	CB on upst	ream side.	
7	ADT:		Current	307	7,000		~	Drainatad	125,000	
2.	101.		Current	307	,000			Projected	435,000 (Alt. 3)
3	Hvdrai	ılic Data:		Rase Flor	od O100-		2	150	c ₃ / -	
			own	The floor	da Qivo= Lof recor	d if m	reater	450 r than Q ₁₀₀ :	π / s	
Q=				- 1110 11000						
					12			38		
				Unknown available?				WSE=	Unknown	
All	C INITI	шарѕ апс	i studies	avaliable?	IES	·	<u> </u>	NO		
4. I	s the h	nighway lo	cation al	ternative v	vithin a re	-oulate	orv fl	oodway 2		
		YES						oodway !		
			-	-	,,,			•		
5. A	Attach	map with	flood lin	nits outline	ed showin	ng all l	ouildi	ings or othe	er improveme	ente
wit	hin the	e base floo	dplain.			0			ninpro venic	ATCS
Pot	ential	Q100 backy	water dar	nages:						
		2000								
A.		dences?					NO	X	YES_	
B.		r Bldgs?					NO	X	YES_	
C.	Crop						NO	X	YES_	
D.	Natu	ral and be	neficial f	loodplain	values?		NO	X	YES_	
<i>(</i> T	·	CT CC								
0. 1	ype of	f Traffic:								
ΑF	Emero	ency sunn	ly or eva	cuation ro	uta?		NO		MEG	~.
		ency supple			ute:		NO.		YES_	X
		able detou					NO.		YES_	X
		bus or ma					NO.	$\frac{X}{X}$	YES — YES	
							110		1E3_	-
7. E	stimat	ed duratio	n of traf	fic interrur	otion for 1	100-ye	ar ev	ent hours:	0	
				1					0	
8. E	stimat	ed value o	of Q100 flo	ood damag	ges (if any	y) – mo	odera	te risk leve	l.	

A. B.	Roadway Property Total	\$ \$ \$	0 0		
9	Assessment of Le	vel of Risk	Low Moderate High	Х	
For High May be i	n Risk projects, durinecessary to determ	ing design phase, a ine design alterna	additional Desi tive.	gn Study	Risk Analysis
	e – Dist. Hydraulic mbers 3,4,5,7,9)	Engineer			Date
Is there a	ny longitudinal end tible Floodplain dev	croachment, signif velopment?	icant encroach	ment, or	any support of
If yes, pro	ovide evaluation ar 550.113	nd discussion of pr	NO acticability of	X alternativ	YES ves in accordance with
Informati Study sha	on developed to coall be retained in the	emply with the Fed e project files.	leral requireme	ent for the	e Location Hydraulic
	: – Dist. Project Eng nbers 1,2,6,8)	gineer			Date

Dist. <u>12</u> Co.	OC	_Rte.	405	P.M.	12.41	
EA <u>071621</u>				Bridge No.	. 55 0258	
Floodplain Description:	Santa Ana	River			***	
1. Description of Proposetc. and design elements				e. concrete	e barriers, sou	ındwalls,
Bridge widening, pier wa	all extension, i	new pier v	walls for E	uclid on-ra	imp.	
2. ADT: Curr	rent307,	,000		Projected	435,000 (Alt. 3)
3. Hydraulic Data:				,000		
WSE100= Unknown		of record	l, if greater	than Q100:		
$Q = \frac{\text{Unknown } \text{ft}^3}{}$	S	WSE=	Unknown			
Overtopping flood Q=				WSE=	Unknown	
Are NFIP maps and stud	ies available?	YES	X	NO		
4. Is the highway location YES X	<u></u>	NO				
5. Attach map with flood within the base floodplai		d showin	g all buildi	ngs or othe	er improveme	nts
Potential Q100 backwater	damages:					
A. Residences?			NO	X	YES	
B. Other Bldgs?			NO	X	YES	
C. Crops?			NO	X	YES	
D. Natural and benefic	ial floodplain	values?	NO	X	YES_	
6. Type of Traffic:						
A. Emergency supply or	evacuation rou	ıte?	NO		YES	X
B. Emergency vehicle ac			NO		YES	X
C. Practicable detour ava			NO	X	YES	
D. School bus or mail ro	ıte?		NO.	X	YES _	
7. Estimated duration of	traffic interrup	otion for 1	00-year ev	rent hours:	2	
8. Estimated value of Qu	o flood damag	es (if any) – modera	te risk leve	1.	

A. B.	Roadway Property Total		0 0 0			SI .
9	Assessment of Lev	vel of Risk	Low Moderate High	X		
For High May be n	Risk projects, duri	ng design phase, ad ine design alternativ	ditional Design /e.	Study F	Risk Analy	sis
	e – Dist. Hydraulic mbers 3,4,5,7,9)	Engineer			Date -	
Is there a	ny longitudinal enc ible Floodplain dev	roachment, signific velopment?	ant encroachme	ent, or an	y support	of
If yes, pro 23 CFR 6	ovide evaluation an 50.113	d discussion of prac	NO cticability of alt	ernatives	ES s in accord	X lance with
Informati Study sha	on developed to co Il be retained in the	mply with the Fede e project files.	ral requirement	for the I	Location H	ydraulic
	– Dist. Project Eng abers 1,2,6,8)	gineer		D	ate _	

Di	ist. <u>12</u>	_Co.	OC	Rte.	405	P.M.	12.87	
\mathbf{E}^{A}	A <u>071621</u>					Bridge No	. N/A	
Fl	oodplain Descrij	otion:	Fountai	n Valley Ch				
1.	Description of F	roposal	(include	any physica	al barriers	i.e. concrete	harriers so	ındwalle
etc	and design ele	ments to	minimiz	e floodplair	impacts)		e ourrers, so	mawans,
				-				
Ro	adway widening	g over 2-1	10x7 RC	B, lengthen	culvert, n	nodify inlet	and outlet st	ructures.
_								
2.	ADT:	Current	t3	07,000		Projected	435,000 (Alt. 3)
3.	Hydraulic Data:		Base F	lood Q100=	1	172	ft^3 / s	
	SE100= Unk	nown	The flo	od of record	d, if greate	r than Q100:		
Q=	Unknown	$\frac{1}{2}$ ft ³ / s		WSE=	Unknown			
Ov	ertopping flood	Q=	Unknov	$vn m^3/s$		WSE=	Unknown	
Are	e NFIP maps and	d studies	available	e? YES	X	NO		
4. I	s the highway lo		ternative			loodway?		
	YES	S	-	NO	X	_		
-		100 N 1000						
5. A	Attach map with	flood lin	nits outli	ned showin	g all build	ings or othe	r improveme	nts
wit	hin the base floo	odplain.						
Dot	antial Oua hade							
rot	ential Q100 back	water dar	nages:					
A.	Residences?				NO	37	TIDO	
В.	Other Bldgs?				NO NO		YES_	
C.	Crops?				NO		YES_	
D.	Natural and be	neficial f	loodnlai	n values?			YES_	
D .	rvaturar and be	ileffetat 1	iooupiai	ii values?	NO	X	YES_	
6. T	ype of Traffic:							
	JP							
A. E	Emergency supp	ly or eva	cuation r	oute?	NO		YES	v
	Emergency vehic				NO		YES _	X X
	racticable detou				NO	X	YES —	
D. S	School bus or ma	ail route?			NO	X	YES —	
							110_	
7. E	stimated duration	n of traff	ic interr	uption for 1	00-year ev	ent hours:	2	
						-		
8. E	stimated value of	of Q100 flo	ood dama	ages (if any) – modera	te risk level		

A.	Roadway	\$	0			
B.	Property	\$	0			
	Total	\$	0			
9	Assessment of	Level of Risk	Low	X		
			Moderate	e		
			High			
For H	igh Risk projects.	during design phas	e. additional D	esign Stud	lv Rick Analysis	
		ermine design alter		osign stat	29 103K 7 11ta1 y 313	
a.	D' 11 1	1' 7				
	ture – Dist. Hydrau		· · · · · · · · · · · · · · · · · · ·		Date	
(Hem	numbers 3,4,5,7,9)				
Is ther	e any longitudinal	encroachment, sig	nificant encroa	chment, o	er any support of	
	patible Floodplain				The state of	
			NO	X	YES	
If yes,	provide evaluatio	n and discussion of	practicability	of alternat	tives in accordance	with
23 CF	R 650.113					
Inform	nation dayslaned t	o comply with the	Fadaral magnina		d. r , rr 1	
		n the project files.	rederai require	ment for t	the Location Hydrau	ilic
Study	shan be retained in	if the project mes.				
~.	D					
	ure – Dist. Project numbers 1,2,6,8)	Engineer			Date	

Di	st.	12	_Co.	OC	Rte.	405		P.M.	14.50/16.98	
EA	1	071621	_					Bridge No.	55 0478	
Flo	oodplai	in Descrip	tion:	Ocean Vie	w Channe	el				
etc	. and d	lesign elen	nents to	minimize f	loodplair	impa	cts)		e barriers, sour	ndwalls,
Ro	adway	widening	over 2-1	2x9.5 RCI	B, lengthe	en culv	ert u	ipstream.		
2. /	ADT:		Current	257,	,000	_		Projected	352,000 (Alt. 3)
3. I	Hydrau	ilic Data:		Base Floo	od Q100=		1,9	930	ft^3/s	
								than Q100:		
Q=		Unknown	ft^3/s		WSE=	Unkr	own			
				Unknown					Unknown	
Are	NFIP	maps and	studies	available?	YES	Σ				
5. A	Attach	YES	flood lin	-	NO	X			er improvemer	ıts
Pote	ential (Q100 backv	vater dar	nages:						
A.	Resid	lences?					NO	X	YES	
В.		·Bldgs?					NO	X	YES	
C.	Crops	s?					NO	X	YES _	
D.	Natu	ral and bea	neficial f	loodplain v	values?		NO.	X	YES_	
6. T	ype of	Traffic:								
A. E	Emerge	ency suppl	y or eva	cuation rou	ıte?		NO		YES	X
B. E	Emerge	ncy vehic	le access	s?			NO		YES -	X
C. P	ractica	able detou	r availab	ole?			NO	X	YES	
D. S	School	bus or ma	il route?	•			NO	X	YES	
7. E	stimate	ed duratio	n of traf	fic interrup	tion for 1	00-ye	ar ev	ent hours:	2	
8. E	stimate	ed value o	f Q100 fl	ood damag	es (if any) – mo	dera	te risk level	l.	

A. B.	Roadway Property Total	\$	0 0		
9	Assessment of Lev		Low Moderate High	X	
For High May be n	Risk projects, during ecessary to determine	ng design phase, ad ne design alternati	lditional Design ve.	n Study	Risk Analysis
	– Dist. Hydraulic Inbers 3,4,5,7,9)	Engineer			Date
Is there are incompation	ny longitudinal enc Ible Floodplain dev	roachment, signific elopment?	ant encroachm	ent, or a	any support of
If yes, pro 23 CFR 6	vide evaluation and 50.113	d discussion of prac	NO eticability of al	X ternative	YES es in accordance with
Information Study shall	on developed to con	nply with the Fede project files.	ral requiremen	t for the	Location Hydraulic
	– Dist. Project Eng bers 1,2,6,8)	ineer]	Date

Dist		_Co.	OC	Rte.	405	-	14.50/16.98				
EA	071621	_				Bridge No.	55 0480				
Floo	dplain Descrip	otion:	East Garde	en Grove	Wintersburg	g Channel					
etc. a	 Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts) New bridges over channel, new pier wall at center of channel. 										
		,	F		tor or char						
2. A	DT:	Curren	t257,	,000	_	Projected	352,000 (2	Alt. 3)			
											
	ydraulic Data:		Base Floo	od Q100=	5,	910	ft^3/s				
	E100= Unk	nown	The flood	of record	d, if greater	than Q100:					
	Unknown				Unknown						
	topping flood						Unknown				
Are l	VFIP maps and	d studies	available?	YES	XX	NO					
4 T-	41 1	4*	12 23	*.1 *	1						
4. IS	the highway lo		iternative w		2001 H.G.S	150					
		,	-	NO	X	-					
	tach map with n the base floo		nits outline	d showin	ig all buildi	ings or othe	er improvemen	its			
Poter	ntial Q100 back	water da	mages:								
A.]	Residences?				NO	X	YES				
В. О	Other Bldgs?				NO		YES _				
C. (Crops?				NO	X	YES				
D. 1	Natural and be	eneficial	floodplain	values?	NO	X	YES				
6. Ty	pe of Traffic:										
A En	nergency supp	olv or eva	cuation rou	ite?	NO		YES	v			
	nergency vehi			ic.	NO		YES —	$\frac{X}{X}$			
	acticable detor				NO	X	YES _				
D. Sc	hool bus or m	ail route	?		NO	X	YES -				
7. Est	imated duration	on of traf	fic interrup	tion for 1	100-year ev	ent hours:	8				
8. Est	imated value	of Q100 fl	ood damag	es (if any	') – modera	ite risk leve	1.				

A.	Roadway	\$	0		
В.	Property	\$	0		
	Total	\$	0		
9	Assessment of	Level of Risk	Low Moderate High	X	
	gh Risk projects, e necessary to det			sign Study Risk Analysis	;
	ure – Dist. Hydrau numbers 3,4,5,7,9			Date	
	e any longitudinal patible Floodplain		gnificant encroac	hment, or any support of	S.
	provide evaluation R 650.113	n and discussion o	NO of practicability o	YESf alternatives in accordan	X ace with
	ation developed to shall be retained in			nent for the Location Hyd	lraulic
	ure – Dist. Project numbers 1,2,6,8)	Engineer		Date	

Dist.	12	_ Co.	OC	_Rte.	405	P.M.	20.56/20.91	
EA	071621	_ .				Bridge No	o. <u>N/A</u>	
Flood	olain Descri	ption:	Milan Sto	orm Drain				
1. Des etc. an	cription of F d design ele	Proposal ments to	(include ar minimize	ny physica floodplair	al barriers	s i.e. concre	te barriers, sou	ndwalls,
Roadw	vay widening	g over 4x	4 RCB, lei	ngthen RC	CB.			
2. AD	Γ:	Curren	t 257	7,000		Projected	352,000 (Alt. 3)
•	raulic Data:		Base Flo		-		$_{\rm ft}^3$ / s	
					350 A TO	ter than Q100):	
6	Unknow	_		22	Unknow	<u>/n</u>		
	pping flood					WSE=	Unknown	
Are NI	FIP maps an	d studies	available?	YES	X	_ NO)	
4. Is th	e highway le YE		Iternative v	within a re		floodway?		
within	ch map with the base floo al Q100 back	odplain.		ed showin	ig all bui	dings or oth	er improveme	nts
A. Re	esidences?				N	о х	YES	
	her Bldgs?				N		- YES	
C. Cr	ops?				N		YES -	
D. Na	atural and be	eneficial	floodplain	values?	N	O X	YES_	
6. Type	of Traffic:							
	ergency supp			ute?	N	0	YES_	X
	rgency vehi				N	0	YES	X
	ticable deto				N		YES_	
D. Scho	ool bus or m	all route	!		N	OX	YES_	
7. Estin	nated durati	on of traf	fic interrup	ption for 1	100-year	event hours:	0	
8. Estin	nated value	of Q100 fl	ood damag	ges (if any) – mode	rate risk lev	el.	

A.	Roadway	\$	0		
B.	Property	\$	0		
	Total	\$	0		
9	Assessment of Le	vel of Risk	Low Moderate High	X	- - -
		ing design phase, a ine design alterna		n Study	Risk Analysis
	e – Dist. Hydraulic mbers 3,4,5,7,9)	Engineer	-		
	ny longitudinal en ible Floodplain de	croachment, signif velopment?		ent, or	any support of
If yes, pro 23 CFR 6		nd discussion of pr	NO racticability of all	X	YES
	on developed to coall be retained in the		deral requiremen	t for the	e Location Hydraulic
_	- Dist. Project Er nbers 1,2,6,8)	ngineer			Date

Dist	. 12	_Co.	OC	Rte.	405		P.M.	23.08	
EA	071621	_]	Bridge No	. N/A	
Floc	odplain Descrip	otion:	Bixby S	torm Chann	iel				
etc.	escription of P and design eler dway widening	ments to	minimiz	e floodplaii	al bar n imp	riers i. acts)	.e. concret	e barriers, sou	ındwalls,
				-4-3-0-3					
2. A	DT:	Currer	it3	70,000			Projected	512,000 (Alt. 3)
WSI	ydraulic Data: E100= <u>Unk</u> ı	nown	_The flo		d, if g	reater	than Q100:	$-ft^3/s$	
	Unknown								
	topping flood						WSE=	Unknown	
Are	NFIP maps and	d studies	available	e? YES	S	X	. NO		
5. At within	the highway log YES tach map with in the base floo ntial Q100 back	flood li	– mits outli	NC)	X		er improveme	nts
A.	Residences?					NO	X	YES	
	Other Bldgs?					NO.	X	YES _	
	Crops?					NO	X	YES _	
D.	Natural and be	neficial	floodplai	n values?		NO.	X	YES	
6. Ty	pe of Traffic:					•			
A. Er	nergency supp	ly or ev	acuation i	oute?		NO		YES	X
B. Emergency vehicle access?								YES	X
C. Practicable detour available?							X	YES	
D. School bus or mail route?							X	YES_	
7. Est	timated duration	on of tra	ffic interr	uption for	100-у	ear ev	ent hours:	8	W
8. Est	timated value	of Q100 f	lood dam	ages (if any	y) – m	odera	te risk leve	1.	

A.	Roadway	\$	0								
В.	Property	\$	0								
	Total	\$	0								
9	Assessment of	f Level of Risk	Low Moderate High	X							
	For High Risk projects, during design phase, additional Design Study Risk Analysis May be necessary to determine design alternative.										
	ure – Dist. Hydra numbers 3,4,5,7,9			-	Date						
Is there incomp	e any longitudinal patible Floodplair	encroachment, sign development?	gnificant encroac	hment, o	r any support of						
			NO	X	YES						
	provide evaluatio R 650.113	n and discussion o	f practicability of	f alternat	ives in accordance with						
Inform Study s	Information developed to comply with the Federal requirement for the Location Hydraulic Study shall be retained in the project files.										
100	ure – Dist. Project numbers 1,2,6,8)	Engineer			Date						